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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,027	08/05/2005	Baolin Tan	P2002-06-01 (191146/US)	9252
71089 7590 03/30/2010 DORSEY & WHITNEY LLP on behalf of EchoStar Technologies, L.L.C. 370 Seventeenth St. Suite 4700 Denver, CO 80202-5647				
EXAMINER				
ATALA, JAMIE JO				
ART UNIT		PAPER NUMBER		
2621				
NOTIFICATION DATE		DELIVERY MODE		
03/30/2010		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing-dv@dorsey.com
docketingdv@dorsey.foundationip.com

Office Action Summary

Application No.

10/520,027

Applicant(s)

TAN ET AL.

Examiner

JAMIE JO ATALA

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/15/2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 73-154 is/are pending in the application.
- 4a) Of the above claim(s) 142-154 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 73-141 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S5108)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see arguments, filed January 15, 2010, with respect to Claim 73 have been fully considered and are persuasive. The non-final of October 23, 2009 has been withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 73-141 rejected under 35 U.S.C. 103(a) as being unpatentable by Mellows et al (US 6,091,822) in view of Goldberg et al (US 2002/0009000).
[claim 73]

In regard to Claim 73, Mellows et al discloses a method of generating or modifying a program signal to provide protection against copying on a program recording device, the method comprising the steps of:

- receiving a program signal or information for generating a program signal divided into lines of information, said signal having horizontal synchronization pulses and vertical synchronization pulses for synchronizing the program on the screen of a

receiver (Figure 1 and further describes the vertical and horizontal synchronization pulses being present in the signal in Column 6 Lines 18-54);

- adding a pulse into said program signal (Column 6 Lines 45-50 describes the additional of pulse signal of the video signal and further described in Column 7 Lines 5+);
- adding a first modulation signal to vertical synchronization pulses of said program signal (Column 8 Lines 66+ through Column 9 Lines 1-57 describes the vertical modulation signal that is provided to the program signal);
- adding a second modulation signal to lines of picture information in the vicinity of said vertical blanking region at the bottom of a frame of said program signal (Column 7 Lines 5-67 describes the second modulation signal being added to the signal and seen in Figure 3 bottom over scan portion 9)
- wherein said pulse, and said first and second modulation signals added to said program signal are sufficient such that when said signal is copied by the recording device, interference is produced in the reproduction of the copied signal that is not visible in the reproduction of an uncopied program signal (Column 9 Lines 60+ through Column 10 Lines 1+ describes the concealing of the modulation signals to provide proper interference based on unauthorized use/copy); however, fails to disclose adding a pulse into said program signal during the horizontal blanking interval of lines that contain picture information and into lines in the vertical blanking region.

Goldberg et al teaches a system for adding pulse information into the program signal as seen in Figures 4 and 11. The system adds the additional signal as described in Paragraphs 0045-0075 . The system provides the adding of the program signal to allow for further a more efficient compression and decompression of the signal at a reduced data rate. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the system as disclosed by Mellows, and further provide adding a pulse into the program signal, as taught by Goldberg et al, to allow for more efficient processing of the signal.

[claim 74]

In regard to Claim 74, Mellows discloses a method comprising amplifying the picture information in lines of the program signal to increase the brightness of the signal such that the darkening effect of adding the pulse and the first and second modulated signals is reduced (Column 1 Lines 55+ describes the increase of brightness).

[claim 75]

In regard to Claim 75, Mellows discloses a method wherein the pulse is added to the horizontal blanking interval adjacent the horizontal synchronization pulse (Column 8 Lines 66+ through Column 9 Lines 1-57 describes the modulation signal that is provided to the program signal).

[claim 76]

In regard to Claim 76, Mellows discloses a method wherein the pulse is added to the horizontal blanking interval such that the width of the horizontal synchronization pulse is

reduced (Column 8 Lines 52-63 describes the narrowing of the horizontal blanking interval).

[claim 77]

In regard to Claim 77, Mellows discloses a method in which the height of the pulse is in the range 0.5V to 1.5V above the blanking level (Figures 1, 3, and 5 show the height range of the pulse).

[claim 78]

In regard to Claim 78, Mellows discloses a method, in which the height of the pulse is 1V (Figures 1, 3, and 5 show the height range of the pulse).

[claim 79]

In regard to Claim 79, Mellows discloses a method in which the width of the pulse is in the range 0.2 μ s to 4 μ s (Figures 1, 3, and 5 show the width range of the pulse).

[claim 80]

In regard to Claim 80, Mellows discloses a method in which the width of the pulse is 1.2 μ s (Figures 1, 3, and 5 show the width range of the pulse).

[claim 81]

In regard to Claim 81, Mellows discloses a method wherein the pulse is positioned such that the width of the horizontal synchronization pulse is reduced by 0 μ s to 2 (Figures 1, 3, and 5 show the width range of the pulse).

[claim 82]

In regard to Claim 82, Mellows discloses a method wherein the pulse is positioned such that the width of the horizontal synchronization pulse is reduced by 0.8 μs (Figures 1, 3, and 5 show the width range of the pulse).

[claim 83]

In regard to Claim 83, Mellows discloses a method comprising adding the pulse to the horizontal blanking interval such that one or more of the height, the width, and the position of the pulse varies across the lines of the program signal (Figures 1, 3, and 5 show the width range of the pulse).

[claim 84]

In regard to Claim 84, Mellows discloses a method wherein the first modulation signal has a frequency in the range 100 kHz to 6500 kHz (Figures 1, 3, and 5 show the width range of the pulse).

[claim 85]

In regard to Claim 85, Mellows discloses a method wherein the first modulation signal has a frequency of 400 kHz (Figure 15).

[claim 86]

In regard to Claim 86, Mellows disclose a method wherein the height above the blanking level to which the first modulation signal extends is 250 mV (Figures 1, 3, and 5 show the width range of the pulse).

[claim 87]

In regard to Claim 87, Mellows discloses a method wherein the first modulation signal is a square wave (Figures 1, 3, and 5 shows the modulation signal).

[claim 88]

In regard to Claim 88, Mellows discloses a method wherein the first modulation signal is a sine wave (Figures 1, 3, and 5 shows the modulation signal).

[claim 89]

In regard to Claim 89, Mellows discloses a method wherein the first modulation signal is a saw tooth function (Figures 1, 3, and 5 show the modulation signal).

[claim 90]

In regard to Claim 90, Mellows discloses a method wherein the frequency of the first modulation signal is varied between different vertical synchronization pulses (Column 8 Lines 55+ describes the differences between the synchronization pulses).

[claim 91]

In regard to Claim 91, Mellows discloses a method wherein the second modulation signal has a frequency in the range 10 kHz to 2 MHz (Figures 1, 3, and 5 show the width range of the pulse).

[claim 92]

In regard to Claim 92, Mellows discloses a method according to claim 73, wherein the second modulation signal has a frequency of 220 kHz (Figures 1, 3, and 5 show the width range of the pulse).

[claim 93]

In regard to Claim 93, Mellows discloses a method according to claim 73 wherein the second modulation signal has an amplitude in the range 40 mV to 150 mV (Figures 1, 3, and 5 show the width range of the pulse).

Art Unit: 2621

[claim 94]

In regard to Claim 94, Mellows discloses a method wherein the second modulation signal has an amplitude of 70 mV (Figures 1, 3, and 5 show the width range of the pulse).

[claim 95]

In regard to Claim 95, Mellows discloses a method wherein the second modulation signal is a square wave (Figures 1, 3, and 5 shows the modulation signal).

[claim 96]

In regard to Claim 96, Mellow discloses a method wherein the second modulation signal is a sine wave (Figures 1, 3, and 5 shows the modulation signal).

[claim 97]

In regard to Claim 97, Mellow disclose a method wherein the second modulation signal is a saw tooth function (Figures 1, 3, and 5 shows the modulation signal).

[claim 98]

In regard to Claim 98, Mellow discloses a method wherein the second modulation signal is added to between 5 and 15 lines of picture information prior to the vertical blanking section (Column 9 Lines 1-57 describes the vertical blanking section).

[claim 99]

In regard to Claim 99, Mellow discloses a method wherein the second modulation signal is added to 12 lines of picture information prior to the vertical blanking section (Column 8 Lines 1-65 describes the vertical blanking section of the pictures).

[claim 100]

In regard to Claim 100, Mellow discloses a method wherein at least one of the number of lines to which the second modulation signal is added, the amplitude of the modulation signal, and the frequency of the modulation signal is varied from frame to frame of the program signal (Column 8 Lines 1-67 through Column 9 Lines 1+).

[claim 101]

In regard to Claim 101, Mellow discloses a method wherein the pulse and first and second modulation signals are added to the program signal in dependence on information relating to the type of receiver on which the program signal is to be viewed (Column 6 Lines 18-54).

[claim 102]

In regard to Claim 102, Mellow discloses a method wherein the picture information is amplified by adding 100 mV to the region of the signal comprising the picture information (Figures 1, 3, and 5 shows the modulation signal).

[claim 103]

In regard to Claim 103, Mellow discloses a method according to claim 74, wherein the picture information is amplified by multiplying the region of the signal comprising the picture information by a scaling factor (Column 6 Lines 18-67).

[claim 104]

In regard to Claim 104, Mellow discloses a method wherein the picture information is amplified by multiplying the region of the signal comprising the picture information by an amount that vanes in dependence on information relating to the type of receiver on which the program signal is to be viewed (Column 6 Lines 18-54).

[claim 105]

In regard to Claim 105, the claim has been recited in Claim 73.

[claim 106]

In regard to Claim 106, Mellow discloses an apparatus for modifying a program signal as discussed in Claim 73 with additional physical components found in Figures 7a-7b, 8 and 11).

[claim 107]

In regard to Claim 107, the claim has been recited in Claim 74.

[claim 108]

In regard to Claim 108, Mellow discloses an apparatus wherein the amplifier comprises: a brightness separator for extracting a brightness signal from the received program signal; an analyzer for analyzing the brightness information and determining, in conjunction with information describing the receiver on which the modified program signal is to be viewed; an amplification amount by which the brightness signal is amplified in the amplifier; a forth adder, coupled to the first to third adders, for receiving the modified program signal and adding to it the amplified brightness signal. 109: (Previously Presented) An apparatus according to claim 106, wherein the first adder is operable to add the pulse to the horizontal blanking interval adjacent the horizontal synchronization pulse (Figures 7a-7b).

[claim 109]

In regard to Claim 109, the claim has been recited in Claim 76.

[claim 110]

In regard to Claim 110, the claim has been recited in Claim 76.

[claim 111]

In regard to Claim 111, the claim has been recited in Claim 77.

[claim 112]

In regard to Claim 112, the claim has been recited in Claim 78.

[claim 113]

In regard to Claim 113, the claim has been recited in Claim 79.

[claim 114]

In regard to Claim 114, the claim has been recited in Claim 80.

[claim 115]

In regard to Claim 115, the claim has been recited in Claim 81.

[claim 116]

In regard to Claim 116, the claim has been recited in Claim 82.

[claim 117]

In regard to Claim 117, the claim has been recited in Claim 83.

[claim 118]

In regard to Claim 118, the claim has been recited in Claim 84.

[claim 119]

In regard to Claim 119, the claim has been recited in Claim 85.

[claim 120]

In regard to Claim 120, the claim has been recited in Claim 86.

[claim 121]

In regard to Claim 121, the claim has been recited in Claim 87.

[claim 122]

In regard to Claim 122, the claim has been recited in Claim 88.

[claim 123]

In regard to Claim 123, the claim has been recited in Claim 89.

[claim 124]

In regard to Claim 124, the claim has been recited in Claim 90.

[claim 125]

In regard to Claim 125, the claim has been recited in Claim 91.

[claim 126]

In regard to Claim 126, the claim has been recited in Claim 92.

[claim 127]

In regard to Claim 127, the claim has been recited in Claim 93.

[claim 128]

In regard to Claim 128, the claim has been recited in Claim 94.

[claim 129]

In regard to Claim 129, the claim has been recited in Claim 95.

[claim 130]

In regard to Claim 130, the claim has been recited in Claim 96.

[claim 131]

In regard to Claim 131, the claim has been recited in Claim 97.

[claim 132]

In regard to Claim 121, the claim has been recited in Claim 98.

[claim 133]

In regard to Claim 133, the claim has been recited in Claim 99.

[claim 134]

In regard to Claim 134, the claim has been recited in Claim 100.

[claim 135]

In regard to Claim 135, the claim has been recited in Claim 101.

[claim 136]

In regard to Claim 136, the claim has been recited in Claim 102.

[claim 137]

In regard to Claim 137, the claim has been recited in Claim 103.

[claim 138]

In regard to Claim 138, the claim has been recited in Claim 104.

[claim 139]

In regard to Claim 139, the claim has been recited in Claim 106.

[claim 140]

In regard to Claim 140, the claim has been recited in Claim 106.

[claim 141]

In regard to Claim 141, the claim has been recited in Claim 106.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMIE JO ATALA whose telephone number is (571)272-7384. The examiner can normally be reached on 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMIE JO ATALA/
Primary Examiner, Art Unit 2621

